

REMARKS

Reconsideration of this application is respectfully requested.

The listing of claims amends claim 15. Claims 15-26 are pending.

A. The Rejection Under 35 U.S.C. § 101 Should Be Withdrawn.

Claims 15-26 were finally rejected under 35 U.S.C. § 101 as allegedly directed to non-statutory subject matter. (Office Action at pages 2-3.) The basis for this rejection is that the Examiner feels the claims are directed to a process that is not concrete, tangible, and useful. (Office Action at page 3.) The Examiner indicated that amendment of the claims to include a step of displaying the data obtained in the method for a user would cause the claims to be directed to statutory subject matter.

Applicants disagree with the Examiner's application of the requirements of § 101 to the claims. However, in order to simplify the issues in view of the final rejection Applicants have amended the claims in view of the Examiner's suggestion. Amended claim 15 recites "... comparing the on-target effect metric to the side effect metric to derive a ratio of on-target effect metric to side effect metric to thereby characterize the treatment; and providing the ratio for a user." Applicants submit that the amended claims are directed to statutory subject matter and that the rejection should be withdrawn.

B. The Rejection Under 35 U.S.C. § 103 Should Be Withdrawn.

Claims 15-23 were finally rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Johnson (US Patent No. 6,611,833) in view of Friend et al. (US

Patent No. 6,801,856). (Office Action at pages 5-10.) Applicants respectfully traverse the rejection.

Applicants argued in the last response that Johnson and Friend fail to disclose or suggest the claimed invention and that the references do not render the invention obvious. Specifically, Applicants argued that Johnson does not derive both an on-target effect signature and a side effect signature from the same population of cells following a treatment. Instead, Johnson is analyzing "normal" and "abnormal" tissues—which are different cell populations. Friend, on the other hand, describes building consensus profiles for response of cells to various drugs by exposing them to graded levels of the drugs. That teaching of Friend does not suggest modification of Johnson to arrive at the claimed invention.

In the Office Action, the Examiner stated her feeling that the attributes of the invention relied on by Applicants as distinguishing over Johnson and Friend are not recited in the claims. Applicants respectfully disagree, but have amended the claims herein to make it even clearer that the claimed subject matter is different than anything described or even suggested in Johnson and Friend. Specifically, independent claim 15 recites "providing a population of cells" and "applying a treatment to the population of cells." The claim then recites "deriving a plurality of cellular features from at least a first captured image of the population of treated cells." Thus, the cellular features are derived from the population of cells after treatment. The claim then recites "creating an on-target effect signature, which is characteristic of an on-target effect of the treatment on the population of treated cells" and "creating a side effect signature, which is

characteristic of a side effect to the on-target effect of the treatment on the population of treated cells."

Based on the antecedent basis present in the claim for the terms used, the language of the claim makes clear that the on-target and side effect signatures are created from the same population of cells, and that those signatures are derived after treatment. As Applicants argued in the last response, the cited art does not disclose or even fairly suggest such a method. The Examiner appears to agree, as the main thrust of the rejection in the outstanding Office Action was the Examiner's feeling that the claims did not require that those aspects be present. In view of the amendments, Applicants submit that it is clear that the inventions of claim 15, and claims 16-24, which depend from claim 15, are not suggested by Johnson and Friend. Therefore, this rejection should be withdrawn.

C. Conclusion.

Applicant respectfully requests that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 15-26 in condition for allowance. Applicants submit that the proposed amendment of claims 15 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

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Attorney Docket No. 09367.0063-00000

Further, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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